

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A primary lithium battery comprising:  
a cylindrical housing having a first end and a second end and having a continuous external wall defining an opening at the first end and enclosing the second end;  
an anode including a lithium-containing anode active material;  
a cathode within the housing comprising a current collector, the current collector having an exposed end shaped into a crown including aluminum;  
a separator within the housing between the anode and the cathode; and  
a positive lead including aluminum within the housing in contact with the crown a portion of the cathode; and  
a positive external contact in contact with the positive lead, closing the opening defined by the external wall at the end of the housing,  
wherein the battery has an impedance that increases by less than 0.20 Ohms after the battery is dropped six times from a height of one meter onto a hard surface.
2. (Original) The battery of claim 1, wherein the lithium-containing anode active material is lithium or a lithium alloy.
3. (Original) The battery of claim 1, wherein the positive lead includes a 1000 series aluminum, 2000 series aluminum alloy, a 3000 series aluminum alloy, a 5000 series aluminum alloy, a 6000 series aluminum alloy, or a 7000 series aluminum alloy.
4. (Original) The battery of claim 1, wherein the positive lead includes a 5000 series aluminum alloy.

5. (Original) The battery of claim 1, wherein the positive lead includes an aluminum alloy including 0-0.4% by weight of chromium.

6. (Original) The battery of claim 1, wherein the positive lead includes an aluminum alloy including 0.01-6.8% by weight of copper.

7. (Original) The battery of claim 1, wherein the positive lead includes an aluminum alloy including 0.05-1.3% by weight of iron.

8. (Original) The battery of claim 1, wherein the positive lead includes an aluminum alloy including 0.1-7% by weight of magnesium.

9. (Original) The battery of claim 1, wherein the positive lead includes an aluminum alloy including 0-2% by weight of manganese.

10. (Original) The battery of claim 1, wherein the positive lead includes an aluminum alloy including 0-2% by weight of silicon.

11. (Original) The battery of claim 1, wherein the positive lead includes an aluminum alloy including less than 0.25% by weight of titanium.

12. (Original) The battery of claim 1, wherein the positive lead includes an aluminum alloy including 0-2.3% by weight of nickel.,

13. (Original) The battery of claim 1, wherein the positive lead includes an aluminum alloy including 0-8.2% by weight of zinc.

14. (Currently amended) The battery of claim 1, wherein the  ~~cathode includes a current collector including includes~~ aluminum.

15. (Original) The battery of claim 14, wherein the current collector includes a 1000 series aluminum, a 2000 series aluminum alloy, a 3000 series aluminum alloy, a 5000 series aluminum alloy, a 6000 series aluminum alloy, or a 7000 series aluminum alloy.
16. (Original) The battery of claim 14, wherein the current collector includes a 6000 series aluminum alloy.
17. (Original) The battery of claim 14, wherein the current collector includes an aluminum alloy including 0-0.4% by weight of chromium, 0.01-6.8% by weight of copper, 0.05-1.3% by weight of iron, 0.1-7% by weight of magnesium, 0-2% by weight of manganese, 0-2% by weight of silicon, less than 0.25% by weight of titanium, 0-2.3% by weight of nickel, and 0-8.2% by weight of zinc.
18. (Original) The battery of claim 1, wherein the positive lead includes an extension directed toward the cathode.
19. (Original) The battery of claim 1, wherein the positive lead includes four or more extensions directed toward the cathode.
20. (Original) The battery of claim 1, wherein the positive lead includes six or more extensions directed toward the cathode.
21. (Original) The battery of claim 1, further comprising a nonaqueous electrolyte in contact with the anode, the cathode and the separator.
22. (Original) The battery of claim 21, wherein the nonaqueous electrolyte includes an organic solvent.

23. (Original) The battery of claim 21, wherein the nonaqueous electrolyte includes a perchlorate salt.

24. (Original) The battery of claim 1, wherein the cathode includes a manganese dioxide, iron disulfide, a CF<sub>x</sub>, or a vanadate.

25. (Original) The battery of claim 1, wherein the battery is a cylindrical battery.

26. (Original) The battery of claim 1, wherein the battery has an impedance of less than 0.150 Ohms.

27. (Original) The battery of claim 1, wherein the battery has an impedance of less than 0.130 Ohms.

28. (Cancelled).

29. (Original) The battery of claim 1, wherein the positive lead is welded to a portion of the cathode.

30. (Currently amended) A primary lithium battery comprising:

a cylindrical housing having a first end and a second end and having a continuous external wall defining an opening at the first end and enclosing the second end;

an anode including a lithium-containing anode active material;

a cathode within the housing including a current collector including aluminum, the current collector having an exposed end shaped into a crown;

a separator within the housing between the anode and the cathode; and

a positive lead including aluminum within the housing in contact with the crown the cathode; and

a positive external contact in contact with the positive lead, closing the opening defined by the external wall at the end of the housing,

wherein the battery has an impedance that increases by less than 0.20 Ohms after the battery is dropped six times from a height of one meter onto a hard surface.

31. (Original) The battery of claim 30, wherein the current collector and the positive lead each independently include a 1000 series aluminum, a 2000 series aluminum alloy, a 3000 series aluminum alloy, a 5000 series aluminum alloy, a 6000 series aluminum alloy, or a 7000 series aluminum alloy.

32. (Original) The battery of claim 30, wherein the current collector includes 6000 series aluminum alloy and the positive lead includes a 5000 series aluminum alloy.

33. (Original) The battery of claim 30, wherein the current collector and the positive lead each include an aluminum alloy including 0-0.4% by weight of chromium, 0.01-6.8% by weight of copper, 0.05-1.3% by weight of iron, 0.1-7% by weight of magnesium, 0-2% by weight of manganese, 0-2% by weight of silicon, less than 0.25% by weight of titanium, 0-2.3% by weight of nickel, and 0-8.2% by weight of zinc.

34. (Original) The battery of claim 30, wherein the positive lead includes an extension directed toward the cathode.

35. (Original) The battery of claim 30, wherein the positive lead includes four or more extensions directed toward the cathode.

36. (Original) The battery of claim 30, wherein the positive lead includes six or more extensions directed toward the cathode.

37. (Withdrawn) A method of making a primary lithium battery comprising:  
placing a cathode in a housing; and  
contacting the cathode with a positive lead including aluminum.

38. (Withdrawn) The method of claim 37, wherein the positive lead includes a 1000 series aluminum, a 2000 series aluminum alloy, a 3000 series aluminum alloy, a 5000 series aluminum alloy, a 6000 series aluminum alloy, or a 7000 series aluminum alloy.

39. (Withdrawn) The method of claim 37, wherein the positive lead includes a 5000 series aluminum alloy.

40. (Withdrawn) The method of claim 37, wherein the positive lead includes an aluminum alloy including 0-0.4% by weight of chromium, 0.01-6.8% by weight of copper, 0.05-1.3% by weight of iron, 0.1-7% by weight of magnesium, 0-2% by weight of manganese, 0-2% by weight of silicon, less than 0.25% by weight of titanium, 0-2.3% by weight of nickel, and 0-8.2% by weight of zinc.

41. (Withdrawn) The method of claim 37, wherein the cathode includes a current collector including aluminum.

42. (Withdrawn) The method of claim 41, wherein the current collector includes a 1000 series aluminum, a 2000 series aluminum alloy, a 3000 series aluminum alloy, a 5000 series aluminum alloy, a 6000 series aluminum alloy, or a 7000 series aluminum alloy.

43. (Withdrawn) The method of claim 41, wherein the positive lead and the current collector each independently include a 1000 series aluminum, a 2000 series aluminum alloy, a 3000 series aluminum alloy, a 5000 series aluminum alloy, a 6000 series aluminum alloy, or a 7000 series aluminum alloy.

44. (Withdrawn) The method of claim 43, wherein the current collector includes a 6000 series aluminum alloy.

45. (Withdrawn) The method of claim 37, wherein the housing is a cylindrical housing.

46. (Withdrawn) The method of claim 37, wherein the positive lead includes an extension directed toward the cathode.
47. (Withdrawn) The method of claim 37, wherein the positive lead includes four or more extensions directed toward the cathode.
48. (Withdrawn) The method of claim 37, wherein the positive lead includes six or more extensions directed toward the cathode.
49. (Withdrawn) The method of claim 37, wherein the cathode includes a manganese dioxide, iron disulfide, a CF<sub>x</sub>, or a vanadate.
50. (Withdrawn) The method of claim 37, further comprising placing a nonaqueous electrolyte in the housing.
51. (Withdrawn) The method of claim 50, wherein the nonaqueous electrolyte includes an organic solvent.
52. (Withdrawn) The method of claim 51, wherein the nonaqueous electrolyte includes a perchlorate salt.
53. (Withdrawn) The method of claim 38, wherein contacting includes welding.